

M 6.3, 100 km ENE of Hachinohe, Japan

Origin Time: 2020-12-20 17:23:22 UTC (Mon 03:23:22 local)

Location: 40.8667° N 142.5814° E Depth: 35.0 km

Created: 3 weeks, 6 days after earthquake

Estimated Fatalities

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.



Estimated Economic Losses

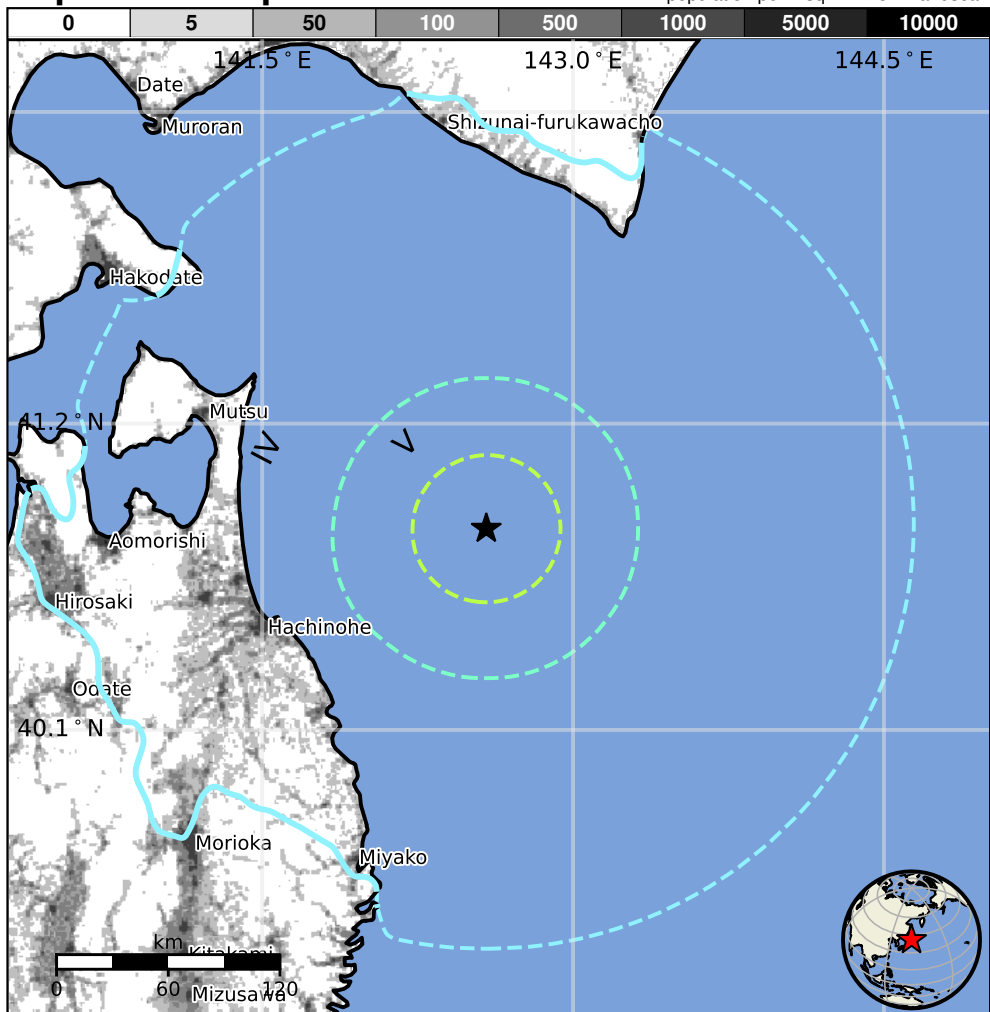


Estimated Population Exposed to Earthquake Shaking

| ESTIMATED POPULATION EXPOSURE (k=x1000) | | —* | 1,415k* | 2,213k | 154k | 0 | 0 | 0 | 0 | 0 |
|---|-----------------------|----------|---------|--------|----------|----------|-------------|------------|----------|----------|
| ESTIMATED MODIFIED MERCALLI INTENSITY | | I | II-III | IV | V | VI | VII | VIII | IX | X+ |
| PERCEIVED SHAKING | | Not felt | Weak | Light | Moderate | Strong | Very Strong | Severe | Violent | Extreme |
| POTENTIAL DAMAGE | Resistant Structures | None | None | None | V. Light | Light | Moderate | Mod./Heavy | Heavy | V. Heavy |
| | Vulnerable Structures | None | None | None | Light | Moderate | Mod./Heavy | Heavy | V. Heavy | V. Heavy |

*Estimated exposure only includes population within the map area.

Population Exposure



Structures

Overall, the population in this region resides in structures that are resistant to earthquake shaking, though vulnerable structures exist. The predominant vulnerable building types are heavy wood frame and reinforced/confined masonry construction.

Historical Earthquakes

| Date (UTC) | Dist. (km) | Mag. | Max MMI(#) | Shaking Deaths |
|------------|------------|------|------------|----------------|
| 1994-12-28 | 81 | 7.7 | VII(130k) | 3 |
| 1983-05-26 | 297 | 7.7 | VII(174k) | 104 |
| 1993-07-12 | 356 | 7.7 | VIII(4k) | 200 |

Recent earthquakes in this area have caused secondary hazards such as landslides and fires that might have contributed to losses.

Selected City Exposure

from GeoNames.org

| MMI | City | Population |
|-----|------------------|-------------|
| V | Uchimar | <1k |
| V | Hachinohe | 239k |
| IV | Misawa | 43k |
| IV | Furudate | <1k |
| IV | Inuotose | <1k |
| IV | Ichinohe | 16k |
| IV | Aomorishi | 298k |
| IV | Hirosaki | 175k |
| IV | Morioka | 295k |
| IV | Hakodate | 276k |
| III | Tomakomai | 175k |

PAGER content is automatically generated, and only considers losses due to structural damage.

Limitations of input data, shaking estimates, and loss models may add uncertainty.

<https://earthquake.usgs.gov/earthquakes/eventpage/us7000csqe#pager>

bold cities appear on map.

(k = x1000)

Event ID: us7000csqe